

1 Mr. Shook showed you during your examination. The first one
2 is document number 027713 and 027714.

3 And, to refresh your recollection, I'm showing
4 you the place on page 027714 which bears your signature and
5 shows an X in the box describing you as "technical
6 director." Is that correct?

7 A Correct.

8 Q And I'm also showing you, just for your review,
9 the transmittal letter that precedes that which is document
10 027713. And my question to you is: Do you know where this
11 document was filed?

12 A Yes. It was filed with the Federal
13 Communications Commission.

14 Q The Federal Communications Commission in
15 Washington, D.C.; is that correct?

16 A Correct.

17 Q And so, pursuant to this document, the Federal
18 Communications Commission was told that you, Ben Miller,
19 were performing engineering services on behalf of National
20 Minority TV, Inc.; is that correct?

21 A That's correct.

22 Q Looking now at the second set of documents that
23 Mr. Shook examined you about, 027715 and 027716, you will
24 see that page 027716 is another page that identifies your
25 name as technical director for that particular applicant; is

1 that correct?

2 A That's correct.

3 Q And I'm correct, am I not, that that particular
4 applicant is the Trinity Christian Center of Santa Ana doing
5 business as Trinity Broadcasting Network for TBN's
6 facilities in Monroe, Georgia; is that correct?

7 A That's correct.

8 Q And can you tell me what your understanding is
9 as to where that particular application was filed.

10 A That was filed with the Federal Communications
11 Commission, Mass Media Services, Pittsburgh, Pennsylvania.

12 Q With the Federal Communications Commission.

13 So is it your understanding that the Federal
14 Communications Commission was informed by this application
15 that you provided engineering services for the Trinity
16 Broadcasting Network?

17 A That's correct.

18 Q And can you tell me to what extent, to your
19 knowledge, the Federal Communications Commission has been
20 similarly informed that you have provided engineering
21 services for the Sonlight entity that was mentioned during
22 your deposition.

23 A Yes. I have prepared and signed as the
24 technical preparer of auxiliary documents, of applications,
25 of technical portions of applications for new television

1 stations or modifications of television stations as well as
2 applications for licenses for television stations.

3 Q And can you tell me to what extent the Federal
4 Communications Commission has been informed of the fact that
5 you have provided engineering services for the Jacksonville
6 Educators Broadcasting entity that has been mentioned during
7 your deposition.

8 A Through preparation of applications for station
9 licenses and auxiliary authorities.

10 Q Can you tell me to what extent the Federal
11 Communications Commission has been advised of the fact that
12 you have performed engineering services for the entity
13 described during your deposition as CET.

14 A Also in the preparation of applications for
15 station licenses and for auxiliary authorization requests.

16 Q And can you tell me to what extent the Federal
17 Communications Commission has been informed of the fact that
18 you have provided engineering services for the entity
19 described during your deposition as All American.

20 A Also in the same way I have prepared the
21 technical filings in support of applications for TV station
22 licenses as well as for auxiliary station filings.

23 Q Am I correct with respect to all of those
24 entities that, in fact, there have been multiple
25 applications filed with the Federal Communications

1 Commission showing that you have provided such engineering
2 services?

3 A Yes.

4 Q A final question, Mr. Miller. Has anyone ever
5 instructed you to conceal the fact that you have provided
6 engineering services for any or all of the entities that
7 we've described above?

8 A No.

9 Q And in my previous questions you understood
10 what I meant?

11 A That's correct.

12 MR. TOPEL: I have no further questions.

13 MR. COHEN: I'd like to think about that last
14 question for a second and see if I have anything. I don't
15 know if Jim has any. I just want to reflect on this for a
16 second.

17 Okay. I have nothing on that.

18 MR. SHOOK: Nothing.

19 MR. COHEN: Thank you very much.

20 (Whereupon the deposition proceedings
21 concluded at 5:10 p.m.)

22 /

23 /

24

25

1 STATE OF _____)
2 COUNTY OF _____) ss.

3
4
5
6
7
8
9 I, the undersigned, say that I have read
10 the foregoing deposition and I declare, under penalty of
11 perjury under the laws of the State of California, that the
12 foregoing is a true and correct transcript of my testimony
13 contained therein.

14 EXECUTED this _____ day of _____,
15 199__, at _____.

16
17
18
19
20
21
22
23
24 _____
WARREN BENTON MILLER, II
(Volume II)

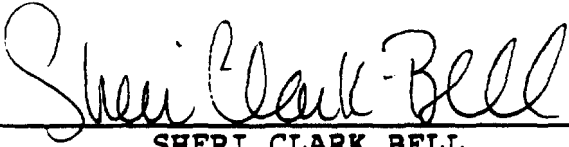
The undersigned Certified Shorthand Reporter of the State of California does hereby certify:

That prior to being examined, the witness in the foregoing proceedings was duly sworn to testify the truth, the whole truth and nothing but the truth.

That said proceedings were taken before me at the time and place therein set forth, and were taken down by me in shorthand and thereafter transcribed into typewriting under my direction and supervision; and I hereby certify that the foregoing transcript of proceedings is a full, true and correct transcript of my shorthand notes so taken.

I further certify that I am neither counsel for nor related to any party to said action, nor in anywise interested in the outcome thereof.

In witness whereof, I have hereunto subscribed my name this 12th day of October, 1923.



SHERI CLARK BELL
CSR No. 6368

National Minority TV, Inc.

Master Control Operator

Orientation Handbook

Revision 12/90

Foreword

The purpose of this booklet is to provide you with a guide to what is going to be expected of you in fulfilling your function as Master Control Operator for this television broadcast station. We hope that the information you find here will help you understand both some of the fundamentals of transmission of the television signal as well as what this station and the Federal Communications Commission expects from you. Please study this information carefully and feel free to ask your Chief Engineer questions regarding any of the areas covered.

FCC rule 73.1860 (c) reads: "It is the responsibility of the station licensee to ensure that each transmitter operator is fully instructed and capable to perform all necessary observations and adjustments of the transmitting system and other associated operating duties to ensure compliance with the rules and station authorization."

Some of the information contained here will assist you in understanding some of your responsibilities. Other instruction must come from actual "hands-on" training you will receive from your station's Chief Engineer pertaining to the specific operation of the equipment in use at your facility.

What are My Responsibilities?: FCC Definition of Control Operator

FCC rule 73.1860 (d): "The transmitter duty operator may, at the discretion of the station licensee and chief operator, be employed for other duties or operation of other transmitting stations if such other duties will not interfere with the proper operation of the broadcast transmission system."

In other words, the FCC is solely interested in your performance as control operator for your station's transmitter. It doesn't care if your station breaks are performed properly, it doesn't care if you are composing award-winning graphics material on the character generator or anything else outside the area of transmitter operation. For many people, this is a hard concept to grasp, especially if the transmitter is remotely controlled and many miles away from the control point at the studio building of the station. The studio, after all, seems to be a busy hub of activity for all that is going on at the station and about the only evidence that there is a transmitter at all is the inconspicuous modulation monitors and remote control unit. It is very easy to be tempted to divert your efforts and attention to other activities such as live production at your studio. Nonetheless, the primary responsibility of the control operator is to monitor, operate and, if necessary, make adjustments to keep the transmitter in full compliance with the Commission's rules. Operators also must know all applicable rules pertaining to transmitter operation.

Thus, it is also the policy of this station to define the Master Control Operator position as being one and the same of what the FCC refers to as the station Control Operator. Although you will be given numerous other responsibilities during your shift, your primary area will always be the lawful operation of the transmitter. This point cannot be overemphasized. Failure to carry out this task in a responsible manner can result in reprimand and even dismissal.

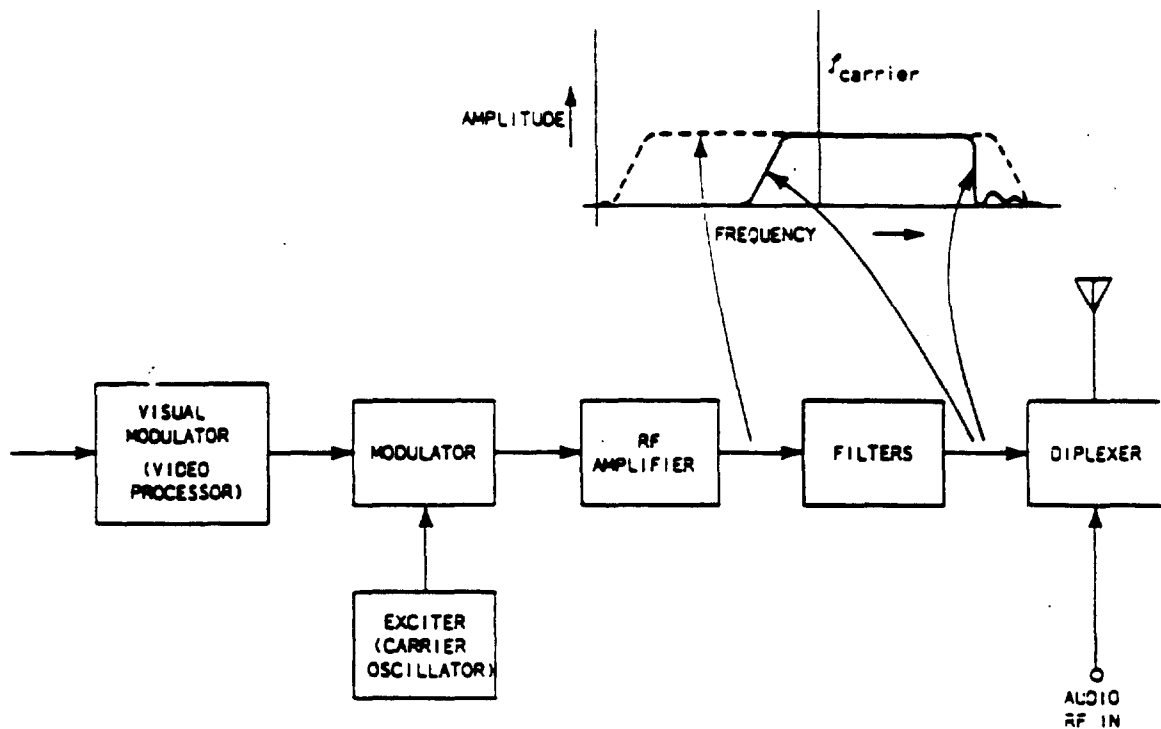
The encouraging fact is that many men and women have launched successful careers in Christian Television by learning and taking a responsible and professional attitude in performing what most certainly is the "heartbeat" of the station.

Television Basics

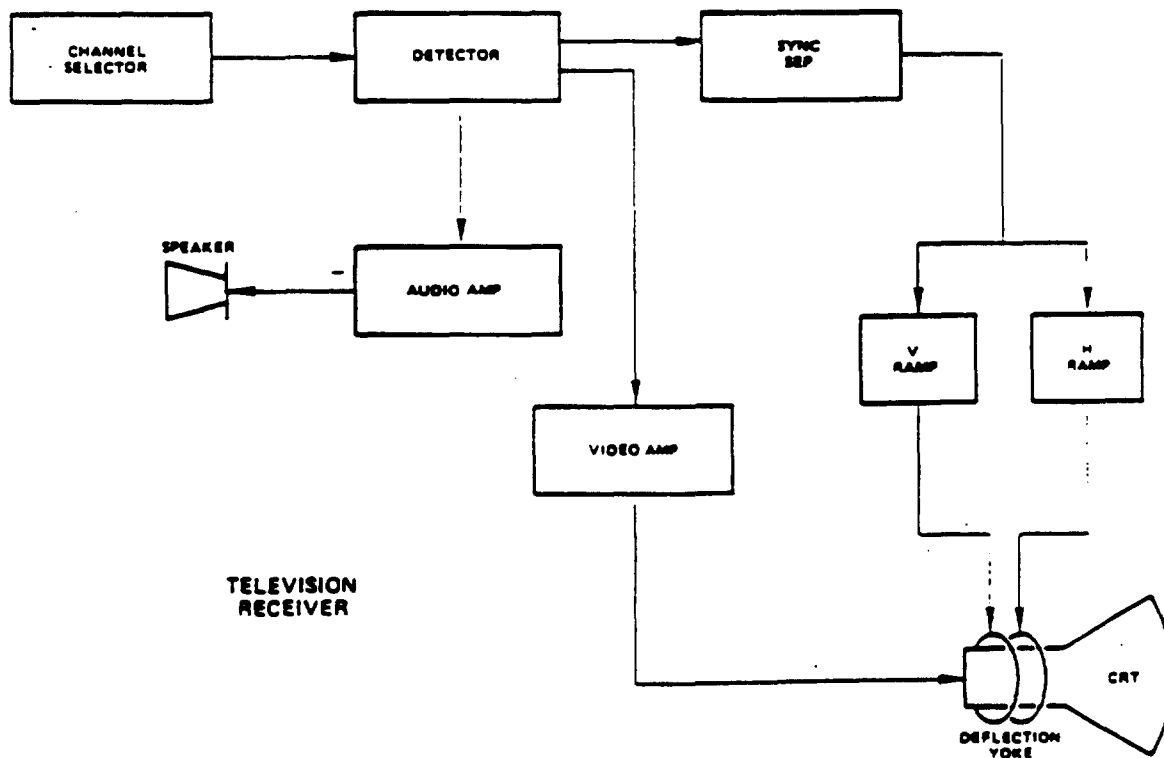
Appendix A is an overview of the fundamentals of the television signal. This information will help you learn how television works, what comprises the video signal and why elements of the signal are necessary. You will learn about the various synchronizing pulses which are needed. The television waveform will also be explained and you will learn methods of measuring it. Of great importance are the terms which will be used. Learn them as you read because many of them describe areas for which you will be responsible in the daily function as Master Control Operator.

Another section addresses the area of transmission of the television signal. Transmission is the process in which the television signal is converted to an electromagnetic wave at radio frequency, and broadcast over your station's antenna so that it may be received in the area in which your station is licensed to broadcast. This process is called modulation. Your primary duty is to observe the process of transmitting the signal. Information is given about the sound signal. Your station's transmission facility is actually two transmitters. One is called a visual transmitter and the other an aural transmitter. The aural transmitter is very much like a radio transmitter. It's function is to transmit a frequency modulated or "FM" signal much like the other FM stations in the area. However, this sound signal is one which is combined with the video information which is transmitted over the visual transmitter.

Finally, you will be given some basic information about the color signal which is broadcast over your station. The signal system which is used in this country to add color information to a black and white signal is an important element which must be constantly monitored by the Control Operator. You must be familiar with the proper techniques for measuring and adjusting your system for proper color transmission. Please study the information in the attached Appendix A entitled; "Some Questions and Answers About Television." Feel free to ask questions from your Chief Engineer if you have difficulty in any particular area.



Signal-flow block diagram of a television transmitter.



Operating Power

FCC Rule 73.1560 (c) (1): "...the visual output power of a TV transmitter... must be maintained as near as is practicable to the authorized transmitter output power and may not be less than 80% nor more than 110% of the authorized power." This procedure should be the same for your aural transmitter.

What this clearly means is that your station's visual transmitter should never be less than 80% nor should it exceed 110% of the power levels on either the forward or combined power meter on the transmitter or the power readings from the remote control unit. Unless under specific orders by your Chief Engineer, all stations should attempt to keep the visual transmitter as close to 100% power as possible. Adjustments should be made periodically to keep the power properly adjusted. Under no circumstances should the power be allowed to exceed 110%. Immediate action should be taken to reduce power when it reaches this level. When the power is below 80% and cannot be raised to a level at or above 80%, the Chief Engineer should be immediately notified. If sustained operation cannot be maintained at or above 80%, it is the responsibility of your station to notify the FCC so that special authority can be obtained to operate at reduced power. It is your responsibility to take any necessary action required as well as bring problems with transmitter power to the attention of the Chief Engineer. Difficulty in maintaining proper aural power should also be reported.

If you normally read power from the aural and visual meter faces of your transmitter, the upper and lower limits (80% and 110%) should be marked on the meter in red ink. These marks may vary from the permanently marked percentage number on the meter. You should always use the temporary red marks as they represent the properly calibrated upper and lower limits. Calibration is performed periodically by your Chief Engineer and is more accurate than the permanent markings.

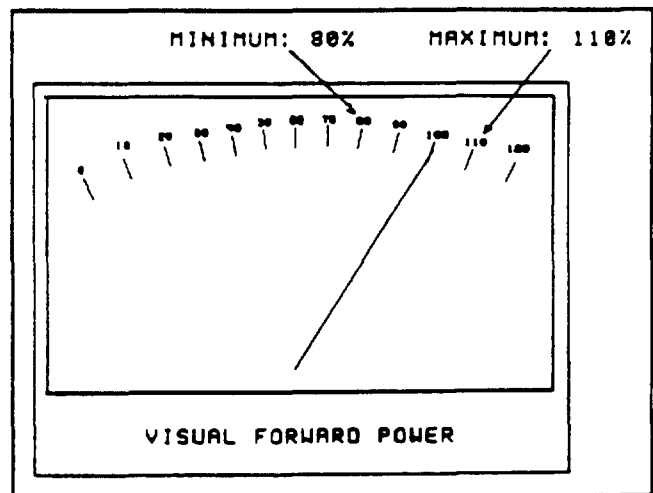


Figure 1 Transmitter Forward Power Meter

You will learn how adjust the aural and visual power levels. When you receive the "hands-on" portion of your training, among the things you will learn is the adjustment of power levels. Make sure you understand these so that when the various circumstances (including those above) call for a power adjustment, you are familiar with the procedure. Also, you will learn about how and when routine adjustments should be made. There will always be small variations in power, and it may the desire of your Chief Engineer to make adjustments when the

power goes beyond a certain point. Find out what your station's policy is in this regard. Finally, remember: when you read the power meter and find it necessary to adjust power, always log the power read before you made the change, then after you made the change. Never log the corrected value only.

Operator Licensing

FCC Rule 73.1860 (a): "Each AM, FM or TV broadcast station must have at least one person holding a commercial radio operator license or permit (any class, unless otherwise endorsed) on duty in charge of the transmitter during all periods of broadcast operation. The operator must be on duty at the transmitter location, a remote control point. . ."

This means that in order to comply with the FCC Rule before you can operate your station's transmitter you must have an FCC Commer. Radio Operator License. If you already have one, then you must bring it to the station and post it prominently in the posting area at your station's control point. If you do not, you must fill out an FCC Form 753 (which will be provided to you). A portion of it will be detached and filed with the FCC along with a filing fee. The other portion will be retained and posted as a temporary until the permanent one is received back from the FCC with a stamp on it.

You will not be permitted to fulfill a shift as Control Operator unless you have a FCC Commercial Radio Operator License. If you have not already completed the procedure in obtaining one, please do so immediately.

Monitoring the Picture

Of critical importance to your responsibilities for the station is making sure that the video signal of the station is as good in quality as possible. You will be using various instruments for this purpose, one of which is the waveform monitor. An incredible amount of information about the video signal your station is transmitting can be seen if the waveform monitor is setup to look at it in the proper way. It is one of the most important tools in use at a television station. Learn it's use well.

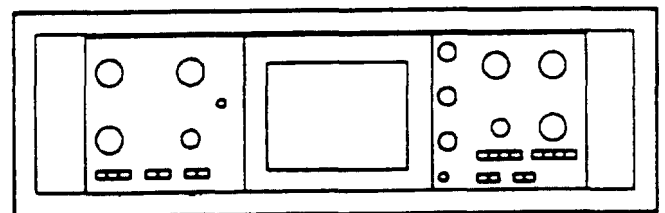
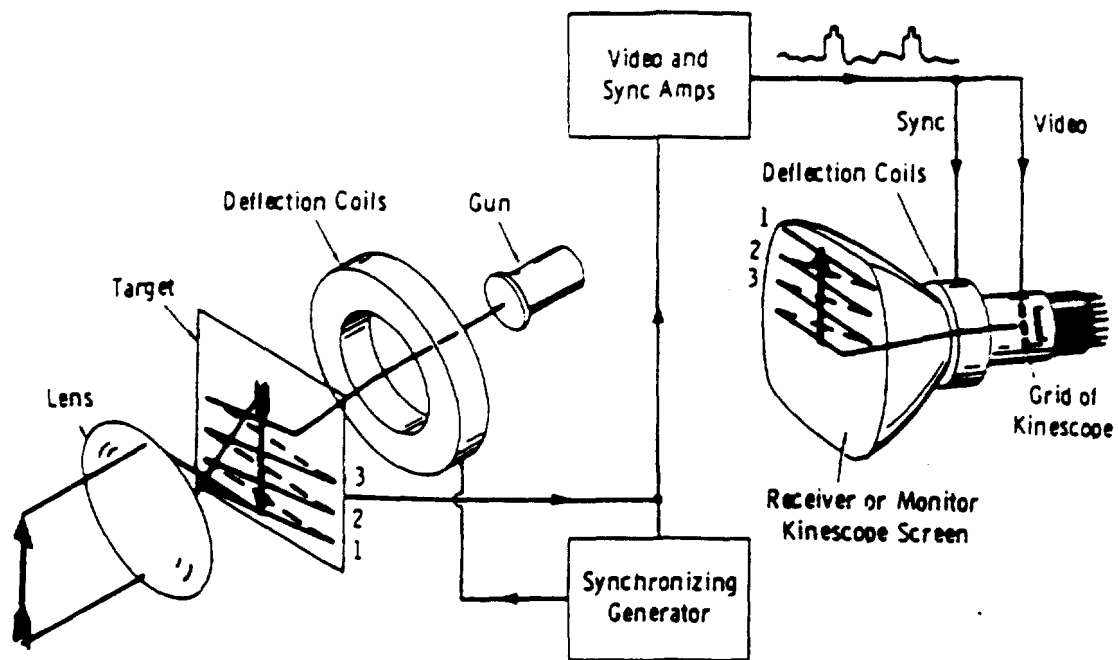
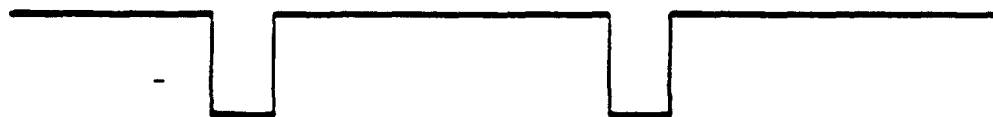


Figure 2 Tektronix 1480R Waveform Monitor



HORIZONTAL SYNC



HORIZONTAL DEFLECTION



Visual Modulation Monitor

FCC Rule 73.691: "Each TV station must have measuring equipment for determining that the transmitted visual signal conforms to the provisions of this subpart. The licensee shall decide the monitoring and measurement methods or procedures for indicating and controlling the visual signal." The "measuring equipment" mentioned in the rule above which this station uses is called a demodulator. The demodulator accepts the signal which is broadcast by your station's transmitter and converts it back into its original unmodulated (or demodulated) form to make it as it was before it was converted to a radio frequency signal. The visual signal which leaves the demodulator then can be monitored in a

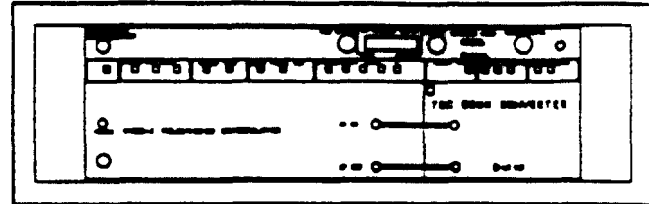


Figure 3 Tektronix 1450 Precision Television Demodulator

color monitor, waveform monitor and vectorscope. Sometimes, such as in the use of the Tektronix Model #1780, the function of waveform monitor and vectorscope can be performed in the same instrument. However, most station still use both the Tektronix 1480R and 520 respectively for these functions. Which units do your station use?

After having read the earlier section on television basics, you are now in a position to begin learning how to use these valuable instruments to verify that the signal your station is transmitting is both compliant with FCC rules and the best possible technical quality. Take time to learn all of the functions. Ask questions from your Chief Engineer if you don't understand how to make certain measurements, or conversely, if you don't know what measurement you are obliged to take. Learn how to "scan" these instruments throughout the day even when you are not setting them up to make specific types of measurements. Learn how to identify signals which are not correct or in need of adjustment by your occasional glances to the waveform monitor and vectorscope.

Figure 4 is an illustration of the various relative levels of sync, picture and zero carrier as seen in the signal delivered by the demodulator. Study it and familiarize yourself with the important measurement points. The measurements shown are ones which you will see when viewing the video signal from your station as it comes from the demodulator. This signal is then sent to the waveform monitor. The values shown are easiest to see when the video filter response is set to IEEE or IRE. This setting allows you to see only the monochrome (or black and white) portion of the signal which makes the measurement of the values you want to see much easier. When you switch in the flat response, you will then be adding chrominance (or color) information which is of value when making other measurements. Chrominance may also be seen using the vectorscope. When you measure depth of modulation you must set your waveform monitor to flat response.

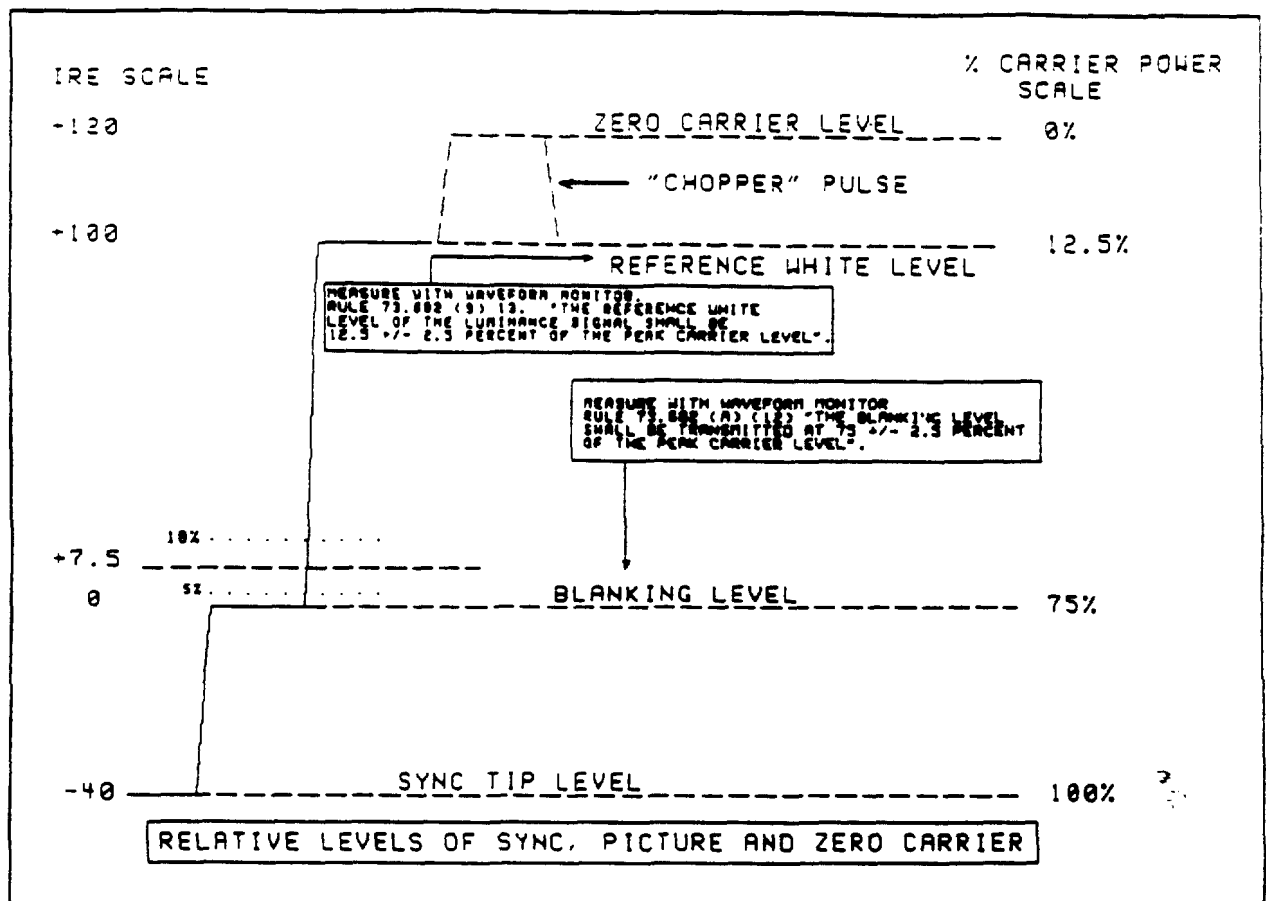


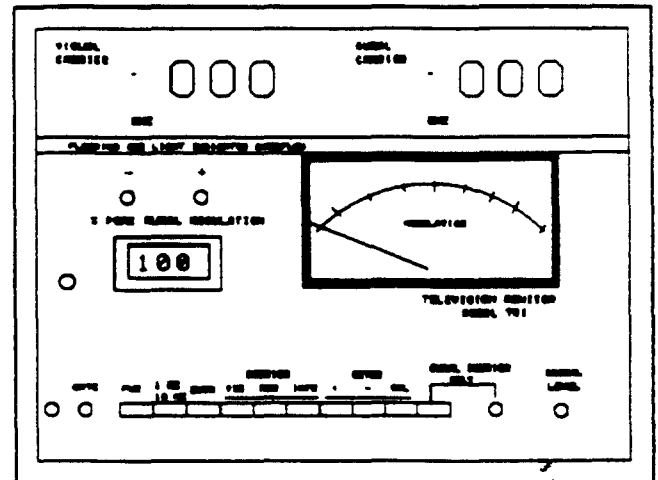
Figure 4 Measurement of the Demodulated Video Waveform

The one on the left side is the IRE scale which is used mostly as a studio measurement of the video waveform, and on the right hand side of the scale is the percentage of modulation scale which is the one used by the FCC and others concerned with the transmission of the video signal from your transmitter.

The zero carrier level (also known as the "chopper pulse") actually represents the lowest amount of modulation and the sync tip level at -40 IRE or 100% modulation represents the greatest amount of modulation. Although this seems confusing because one would logically think that the higher the video level, such as you would see in peak whites, the greater the modulation of the signal. The truth is that the video waveform is actually transmitted upside down (or polarity inverted) so that the whites modulate the least and sync modulates the most. Just keep in mind that the most important thing is that all of the relationships are correct between the zero carrier "chopper", the peak white signal, the blanking signal and the sync tips. When all of these are correct, the depth of modulation is correct. When the day comes where your station actually experiences a transmission problem, rather than trying to explain the problem in your report or to your Chief Engineer in terms such as "wavy lines" or "picture rolling" or "moving horizontally", try looking for important clues in your waveform monitor as to what is wrong with the signal.

Frequency and Aural Modulation Monitor

One of the most valuable instruments which is located at your station's control point is the frequency and aural modulation monitor. Two important measurements are made with it. First, the aural (or sound) modulation of the aural transmitter must be kept within FCC limits in order to avoid over-deviating the FM carrier which is transmitted with the visual signal. You, as control operator have the capability and the responsibility to keep the aural signal within these limits. Failure to maintain the aural carrier within prescribed limits is a violation of FCC rules. Figure 6 illustrates the relationship between the program waveform, the reaction to it by the VU meter and the peak flashers on the TFT Model 701 aural modulation monitor. Study the illustration carefully so that you may understand why both the meter and the peak lights indicate important information about aural modulation. When you have either high meter indications or frequent peak lights flashing you have a situation which calls for adjust of audio levels. Note that there are two scales of measurement used in the demodulated signal. Aural modulation is read on the modulation monitor (TFT model 701 or 702, or the Belar TVM-1). On the TFT model, the level is determined by the meter and the small "+" and "-" flashing indicators to the left of the meter. The audio level you feed your transmitter is determined by the program level control usually either as part of the master control switcher, or as a separate level control which is installed at the operator position. Your Chief Engineer will show you where this adjustment is made at your facility.



FCC rule 73.1570 (b) (3) reads: "In no case shall the total modulation of the aural carrier exceed 100 percent on peaks of frequent recurrence. . ." The percentage of modulation shall be maintained as high as possible consistent with good quality of transmission and good broadcast picture. Generally, it should not be less than 85 percent on peaks of frequent recurrence, but where necessary to avoid objectionable loudness modulation may be reduced to whatever level is necessary, even if the resulting modulation is substantially less than 85 percent on peaks of frequent recurrence. This value is determined by the 100% peak indicating lights on the modulation monitor. The lights should seldom flash but the meter indication should be as high as possible at the same time without going over 100%. The lights are more sensitive to peaks than the meter. You must constantly watch the modulation monitor and do not allow the peak indicator lights to flash excessively. The FCC goes by the light - not the meter!

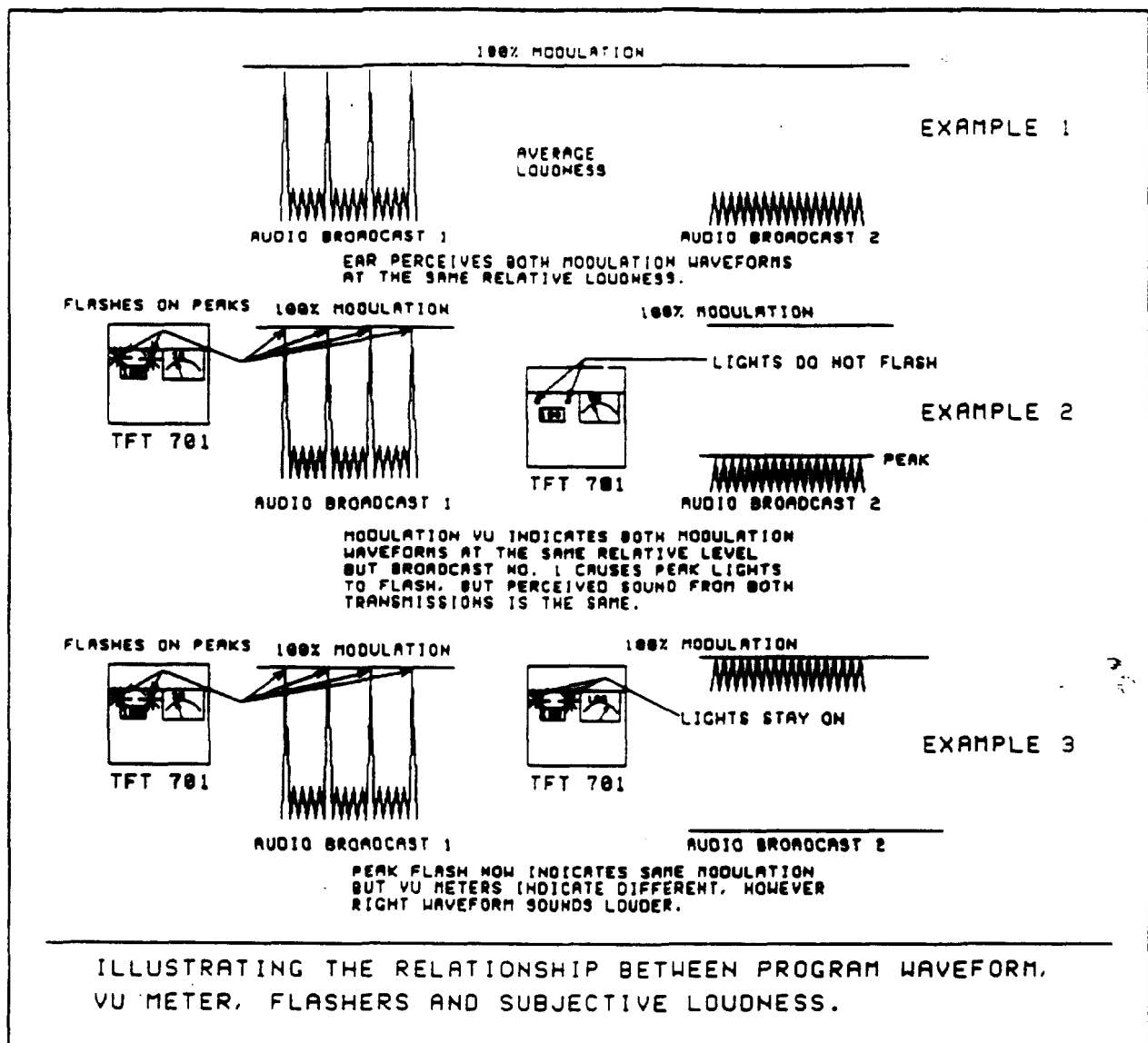


Figure 6 Indications of the Aural Modulation Monitor

When the "% Peak Aural Modulation" thumbwheels are set for 100%, the lights will flash when modulation exceeds 100% even though the needle on the modulation meter may never venture near 100%. This is because the meter does not react quickly to peaks of short duration. This is the purpose for the lights. Aural modulation is affected by dynamic range which is the difference between the overload signal and the minimum acceptable signal level in an audio system.

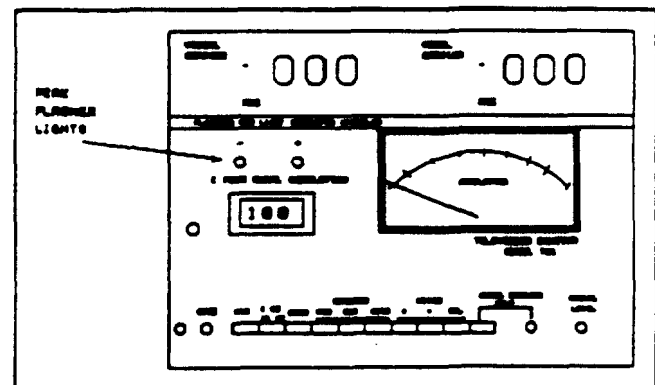


Figure 7 TFT 701 Aural Peak Indicating Lights

Frequency Deviation

The second important function of the TFT 701 is it's ability to measure the aural, visual and intercarrier frequencies. When these measurements are made, a comparison is made with where the frequencies should be. The difference is called frequency deviation. This deviation is measured in hertz (or cycles per second). FCC rule 73.1545 (c) (1) states: "The departure of the visual carrier frequency of a TV station may not exceed ± 1000 Hz from the assigned visual carrier frequency. (2) The departure of the aural carrier frequency of a TV station may not exceed ± 100 Hz from the actual visual carrier frequency plus exactly 4.5 Mhz." Thus there are three important values which must be verified. The visual and aural carrier frequencies must be no more than ± 1000 Hz from assigned, and the intercarrier (the difference between the aural and visual) must be no more than 4.5 Mhz ± 1000 Hz away from the visual carrier. The visual, aural and intercarrier frequencies can be read from the instrument in Hz above or below the assigned. The assigned frequency is the same as "000" on the instrument. When the numbers are higher or lower than "000", that is the number of hertz above or below assigned frequency that carrier is at the time you read it.

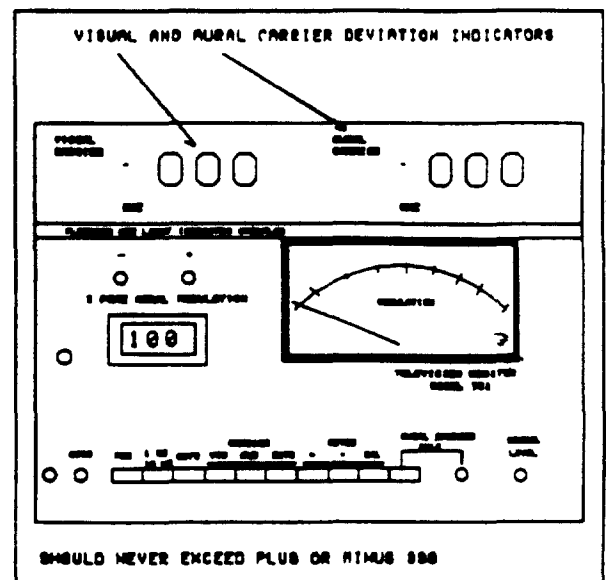
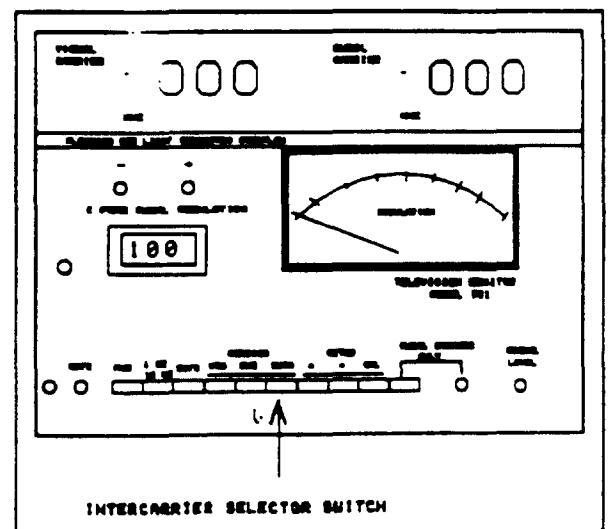


Figure 8 TFT 701 Frequency Deviation Indicators

Figure 9 shows the switch which allows you to read the intercarrier frequency deviation. As in the case of both the visual and aural frequencies, the maximum that this frequency may deviate from the allowed is ± 1000 Hz.



The Four Most Important Indicating Instruments

Summarizing what you have read so far, it can be said that the four most important indicating instruments at the Control Operator's control point for your station's transmitter are:

- The Transmitter Meters
- The Visual Modulation Monitor
- The Aural Modulation Monitor
- The Frequency Deviation Monitor

More About Transmitter Readings

In addition to being your station's FCC authorized control operator, you are also the person designated by your station to make sure that the transmitter is operating reliably. Your station's transmitter is a complex device. One which uses numerous systems to operate properly. Integral to the transmitter are other meters or status indicators very much like an automobile. These can warn the operator of possible dangerous conditions, or can tell the operator why the transmitter has failed. These indicators are located on the transmitter control panel, or in the case of remotely controlled transmitter are made available to the remote control point via either a status or telemetry signal. Here are some examples of some unusual conditions which might appear as a fault or warning for which the control operator must pay very close attention to and, if necessary, take action:

- Temperature or Overtemp light or reading on temperature scale indicates a condition under which the coolant water to the final amplifier tube is approaching a warning point which means that if the water temperature rises any further, the transmitter will "trip off" or remove the high voltage from the final amplifier tube as a safety measure. It is the responsibility of the Control Operator to take immediate action to notify the Chief Engineer that this is occurring so that appropriate action can be taken.

- Flow light means that for some unknown reason, there has been a reduction of coolant flow to the final amplifier tube. The same urgent situation as a temperature or overtemp exists calling for immediate action by the control operator.

- VSWR or Voltage Standing Wave Ratio is another critical indication of a potentially damaging condition to your transmitter. VSWR means that due to a change in conditions somewhere between the final amplifier tube and the antenna, excessive power is being reflected back to the final amplifier. Potential damage to the transmitter may occur if allowed to go higher. Generally this calls for a temporary reduction in power. Again, as in the case of all fault conditions, you must

immediately and without hesitation call your station's Chief Engineer so that he or she may be advised of the situation.

Your transmitter has numerous ways in which fault conditions can be anticipated or observed. Transmitter warnings or failures don't always occur during business hours. You must be the "eyes and ears" of your Chief Engineer when he or she isn't there so that when the inevitable transmitter situation occurs, you are knowledgeable in accurately describing the transmitter conditions to your Chief Engineer. In some cases, you can be instructed over the telephone how to clear a fault condition and get the transmitter on the air again. If you don't take the time to thoroughly familiarize yourself with the transmitter (or remote operation of it) your inability to help may result in much more off air time for your station due to the time it takes for your Chief Engineer to travel to the transmitter or control point to perform an action you could have. Don't let this happen to you! Learn what every meter reading and warning light means. If your transmitter is remotely controlled, make sure you know what every status and telemetry reading signifies. Ask questions. Take notes. Do what is necessary to become a knowledgeable transmitter Control Operator.

In some instances, your Chief Engineer might find it necessary to multiplex your aural and visual amplifiers. This is required in instances where one of the amplifiers have failed and cannot be immediately restarted. When this occurs, it is possible on most transmitters to combine both the aural and visual signals through one final amplifier. This is called multiplexed operation. When your transmitter operates in this mode, you will probably be dealing with readings which will be somewhat different than what you are used to seeing. Also, the visual power will most likely be lower than normal.

Employees who work in stations which are remotely controlled are encouraged to visit the transmitter site with your station's Chief Engineer. Increasing your familiarity with the transmitter is a very beneficial thing so that you may better understand the meaning of the various readings at the other end of the remote control as well as an understanding of what happens when you make adjustments. Most of all you should learn what you can about potentially damaging actions you might inadvertently take!

Your Station's Tower and the FAA

The Federal Aviation Administration is the governmental agency which regulates not only the operations of aircraft and airports, but also who and where towers of all kinds are to be erected. The tower on which your station's antenna is located is there because the FAA rendered a judgement that it could be safely built without being a hazard to aviation. As part of that judgement, the FAA required that your station conform to certain requirements.

The one which is of immediate concern to you as the control operator is the

requirement to monitor the obstruction lighting system. Find out whether your station is required to monitor your tower lights. If it is, then you have the responsibility to log your observation of the operating condition of your tower lights. If, in the process of those observations, you find that, after dusk, a beacon (or flashing light at any level on the tower) is out, or if all of your tower lights are out, you have the FAA mandated obligation to telephone immediately the nearest FAA Flight Service Station and notify them of the condition. Second, notify your Chief Engineer.

If your station uses the high intensity "strobe" type lighting system and one or all of them are out, day or night, you must call the nearest FAA Flight Service Station and notify them of the condition. The telephone number for the FAA Flight Service Station is posted prominently at your station's control point. Again, right after notifying the FAA, notify your station's Chief Engineer. If you can't find the FAA number, tell your Chief Engineer at once.

In either of the above situations you must notify the FAA within 30 minutes.

If your station uses the standard "red" beacon system, and you note that although all of the flashing beacons are working, but one or more of the steady burning lights are out, the FAA does not need to be called, but you should note it in your Station Log and make sure your Chief Engineer is advised immediately.

Emergency Broadcast System

All broadcasters, including your station, are obliged to participate in the Emergency Broadcast System which has been set up to keep your viewing audience advised in the event of an emergency. There are three levels of Emergency Action Notification which can occur during activation of the Emergency Broadcast System. They are, in order of lowest to highest priority:

1. National-Presidential Level
2. Local Level
3. State Level
4. National Level

Your station should be registered with the FCC as a non-participating station. FCC rule 73.918 "Non-participating Station (Non-EBS)". This is a broadcast station which has elected not to participate in the National level EBS and does not hold an EBS authorization. Upon activation of the EBS as the National Level such stations are required to remove their carriers from the air and monitor for the Emergency Action Termination in accordance with the instructions in the EBS Checklist for Non-

Participating Stations. All broadcast stations (including Non-Participating Stations) are required to comply with 73.932."

(Rule 73.932 specifies the equipment your station is required to have installed for sending and receiving the EBS signals).

As a result of your station be a Non-Participating station as described above, you have specific responsibilities in the event of a National Level Emergency Action Notification. If an actual National Level Emergency Action Notification does occur, you are to check it's authenticity by verifying the Authenticator Word which is being given by your Primary Originating Station (the radio station your station's EBS monitor is tuned to which activated your EBS tone decoder). These Authenticator Words can be found with the EBS Checklist information which is posted prominently at the control point. If the Authenticator Word is verified, you are instructed to run the appropriate EBS Emergency sign off announcement, sign your transmitter off and then follow the instructions on the EBS Checklist.

If the Emergency Action Notification is State or Local in nature, you are not obliged to follow the above procedure however, your Station Manager should be notified so that he or she may decide whether or not it would be appropriate for your station to disseminate any type of emergency information. A good example for this would be impending natural disaster or weather information. It is not your decision to broadcast this information without prior authorization from your Station Manager.

EBS Tests

FCC rule 73.691 (c) "Weekly Transmission Tests of the Attention Signal and Test Script. . . these tests shall be conducted by all AM, FM and TV stations a minimum of once a week at random days and times between the hours of 8:30 a.m. local time and local sunset. These tests will be conducted in accordance with procedures set forth in the EBS Checklist furnished to all broadcast stations. . ." This means that your station is obliged to conduct an EBS Test at least once each week on a random basis during the prescribed hours. The responsibility for scheduling will rest the your station's Traffic Department and it will be scheduled on the program log. It is your responsibility, however, to see to it that when you see it scheduled on the log that it is run at the appropriate time, and most importantly logged on the station log. The fact that it is already entered onto the program log already does not fulfill the FCC requirement that it be entered onto the station log after it has been performed!

When you are scheduled to perform the test, you will run an announcement along with an actual activation of your station's Two Tone Encoder. The minimum modulation for each tone is 40%. When you add both of the two tones the total modulation should be 80%. It is a very good idea to set the "% Aural Modulation"

thumbwheel switches on the TFT 701 to the 80% position for the test. Although the modulation meter will probably not reach 80%, your peak lights should illuminate during the transmission of the tone. If they do not, advise your Chief Engineer as soon as possible as you are not transmitting a legal EBS test transmission. Don't forget to reset the thumbwheel switcher back to 100% when the test is concluded.

Also, the station which is acting as your Primary Originating Station is also obliged to perform this test once a week, and when it does your EBS Tone Decoder will activate at your control point. It is your obligation to log the date and time received then this test comes in on the station log.

Your Chief Engineer is responsible to check the station log each week to verify that an EBS test was both sent and received each week. If either or both were not, it is the responsibility of the Chief Engineer to investigate why and see to it that the situation is corrected. Don't let yourself be the reason that one wasn't logged as sent or received, if either occurred (or was scheduled) during your shift!

The Station Log

Another responsibility you have as a control operator is the completion of two different types of log forms. The first is called the station log. This log is an FCC requirement and is a legal document. The information it must contain are Emergency Broadcasting System tests, both sent and received, FAA required tower light observations, and any other FCC pertinent data regarding the lawful operation of your station's transmitter. Your station will most likely use the station log form on which to log your periodic transmitter meter readings. When you make an error on the station log, you cannot erase it and write a new entry and you may not obliterate it. When an error is made, you must put one line through the incorrect entry followed by the correct entry beside it, then you must initial and date the correction.

The Program Log

The second log form which is kept is the program log. This is generally generated by your station's Traffic Department. Although no longer required by the FCC, it is nonetheless an important document to your station as it represents evidence on when and if certain programs and announcements were run. Thus it is an important legal document to your station and must be completed neatly and accurately. Log corrections should be handled in the same manner as the station log.

The Discrepancy Report

This document accompanies both of the log forms and is a record of any event which prevents programming from occurring as it was scheduled. Again, as this is a legal document, it must be completed as accurately and factually as possible. If a program or an announcement was not run due to human or equipment failure, you must give a brief and accurate description as to the circumstances. This is not a forum for editorialization. If you happen to disagree with a station's policy, equipment selection or maintenance record of a particular piece of equipment, the discrepancy report is not the place to rhetorically state your dissatisfaction as an explanation as to why a discrepancy occurred.

Advanced Video Measurement

Appendix B is a copy of the Signal Analysis Form which your station should be using for monitoring of its signal for compliance with FCC rules and good engineering practice. During the course of each Control Operator shift, one of these forms should be completed and submitted to the Chief Engineer for review. This is not only good experience for operators, but it is a useful system whereby the Chief Engineer can spot check the performance of the transmitted parameters of your station.

Appendix C offer additional instructions on how to measure many of the various important parts of the video waveform. Pay particular attention to the limits of each measurement. After you've gained some experience in reading these values, the limits should become second nature. In your monitoring of these parameters, if you note that any one is beyond its tolerance, it is your responsibility to let your Chief Engineer know.

The Signal Analysis Form generally shows the limits of tolerance of each measurement which will provide a guideline to you as you record the various values. After you gain more experience in completing these forms, the limits of these parameters should become second nature to you so that you can more quickly identify conditions which need attention.